

REMARKS

Claims 1-20 continue to be the pending claims in the application. Claims 2-6, 8-12, 14 and 15 were withdrawn in response to the Office Communication dated August 22, 2005. Reconsideration of the application in light of the remarks which follow is respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 7, 13 and 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horner Jr. et al. (U.S. Patent No. 6,365,533) in view of Lynn et al. (U.S. Patent No. 6,093,481) and Morgan et al. (U.S. Patent No. 3,062,682). The Examiner contends that Horner Jr. et al. disclose a foamed facer for an insulation board. The Examiner further contends that the facer of Horner Jr. et al. comprises a fiber mat containing a binder for the fibers, and coated with a prefoamed composition which contains a thixotropic polymer latex, a foam sustaining surfactant, and a filler. The Examiner concedes that Horner Jr. et al. do not teach a metallic layer that is adhered to the foamed facer and that the foamed facer comprises prefabricated microcells but alleges that Lynn et al. provide the teaching of the metallic layer and that Morgan et al. provide the teaching of the prefabricated microcells.

The Claimed Invention

Claim 1 relates to a composite material comprising a first layer which comprises a prefabricated microcells component, a surfactant component, surfactant-generated microcells, a filler component and a binder component and a second layer comprising a metallic component adhered to the first layer. Claims 7, 13 and 16-20 are dependent from Claim 1.

The Prior Art

Horner Jr. et al. disclose a facer member for use in the construction industry comprising a preformed fiber mat substrate coated with a prefoamed, self-sustaining foam mixture. The facer member disclosed by Horner Jr. et al. can be used to manufacture insulation boards comprising a pair of facer members laminated to the surfaces of the foam core of a traditional insulation board. *See* Horner Jr. et al. col. 5, lines 34-39. Horner Jr. et al. teach that the facer member insulation boards have tolerance to weathering and that they are superior and have broader application than other insulation boards, such as being useful as non-foil, non-glare sheathings. *See* Horner Jr. et al. col. 7, lines 9-12. This is consistent with Horner Jr. et al.'s description of the prior art in which foil was used which Horner Jr. et al. describe as "leading to disruption of cell structure, delamination and warping" and as costly and thus not desirable. *See* Horner Jr. et al. col 2, lines 20-24.

Similarly, Lynn et al. disclose a facing sheet for use in fabricating building materials. The facing sheets comprise a polymeric layer or composite thereof. Lynn also teaches that the facing sheet is adhered to at least one major surface of a foam core of a traditional insulation board. The resulting facing composites comprise combinations of an outer polymeric layer with one or more of conventional facing materials including fibrous material, metals, and sheets or films of plastics. *See* Lynn et al. col. 2, lines 32-37. Lynn et al. further disclose that the metallic layer may be adjacent to the foam board. *See* Lynn et al. col. 5, lines 14-16.

Morgan et al. disclose a method of producing a composite foam and mineral product by injection or insertion of a liquid foamable material into a fibrous mass. The product is composed of mineral fibers associated with a foamed material. *See* Morgan et al. col 2, lines 7-10. Morgan et al. further disclose that filler material may be added to the product. Such filler material include, *inter alia*, resinous microballoons. *See* Morgan et al. col 13, lines 62-67.

There is No *Prima Facie* Case of Obviousness

The combination of Horner Jr. et al., Lynn et al. and Morgan et al. does not support a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the combined references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on the Applicants disclosure. *In re Vaeck*, 947 F2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); MPEP § 2142.

In this case, there is no suggestion or motivation in any of the cited references to alter Horner Jr. et al. to produce a composite material according to the present claims. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. See *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Horner Jr. et al. teach facer members which are used to manufacture an insulation board. The facer members include a preformed mat coated with a prefoamed, self-sustaining foam mixture. As noted by the Examiner, the self-sustaining foam mixture may comprise a thixotropic polymer latex, a surfactant and a filler. The facer members can be laminated to both sides of a foam core of a traditional insulation board to produce a composite insulation board.

Lynn et al. similarly teach facing sheets which are applied to the foam core of a traditional insulation board. The facing sheets comprise an outer polymeric layer and may further comprise, a fibrous mid-layer, and/or a metallic layer. The facing sheet is adhered to at least one major surface of the foam core of the traditional insulation board.

The presently claimed composite material comprises at least a first and a second layer, wherein the second layer is a metallic component and wherein the second layer is adhered to the first layer. The first layer of the present invention comprises a prefabricated microcells component, a surfactant component, surfactant-generated microcells, a filler component and a binder component. The Examiner compares the facing member of Horner et al. to the first layer of the present invention and concludes that the combination of Horner et al. and Lynn et al. renders obvious the present invention. However, the skilled artisan would not be motivated by either Horner et al. or Lynn et al. to make the present invention. First, the combination of Horner Jr. et al. and Lynn et al. would, at best, suggest to a skilled artisan to make an insulation board comprising a foam core with the facer member of Horner Jr. et al. adhered to on one side of the foam core and perhaps the facer of Lynn et al. adhered to the other side. Horner et al. and Lynn et al. relate to improving insulation boards by adhering facer members/sheets thereto. There is absolutely no teaching whatsoever in either reference to use the facer members or facer sheets to do anything other than face a foam core of a traditional insulation board.

Second, Horner Jr. et al. actually teach away from the combination with Lynn et al. and from the present invention. Horner Jr. et al. teach that aluminum facers are not desired because they cause disruption, delamination and warping and because they are costly. *See* Horner Jr. et al. col. 2, lines 20-24. The use of aluminum facers as taught by Horner Jr. et al. is also undesirable because such facers hold and reflect heat and often cause warping and deterioration of wood overlayment. *See* Horner Jr. et al. col. 5, lines 50-55. A prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. MPEP § 2141.02 (citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984))(emphasis in original). It is not appropriate to choose only the desired teaching and not that which teaches away. The skilled artisan looking to

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Horner Jr. et al. would not be motivated to combine it with the foil of Lynn et al. because Horner Jr. et al. teach that a foil facer is not desirable. Moreover, Morgan et al. do not provide the teaching necessary to make up for the deficiencies of Horner Jr. et al. and Lynn et al. As noted above, in order for the Examiner to make out a *prima facie* case of obviousness, the combined references must teach or suggest all the claimed limitations which the combined teachings of Horner Jr. et al., Lynn et al. and Morgan et al. fail to do.

Accordingly, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. §103(a) as obvious over Horner Jr. et al. in view of Lynn et al. and Morgan et al.

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Conclusion

In view of the foregoing remarks, Applicants submit that the present invention is now in condition for allowance. Accordingly, favorable reconsideration of the application is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorneys at the address below.

Applicants' undersigned attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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